PC Basics:
An Introduction to the Computer
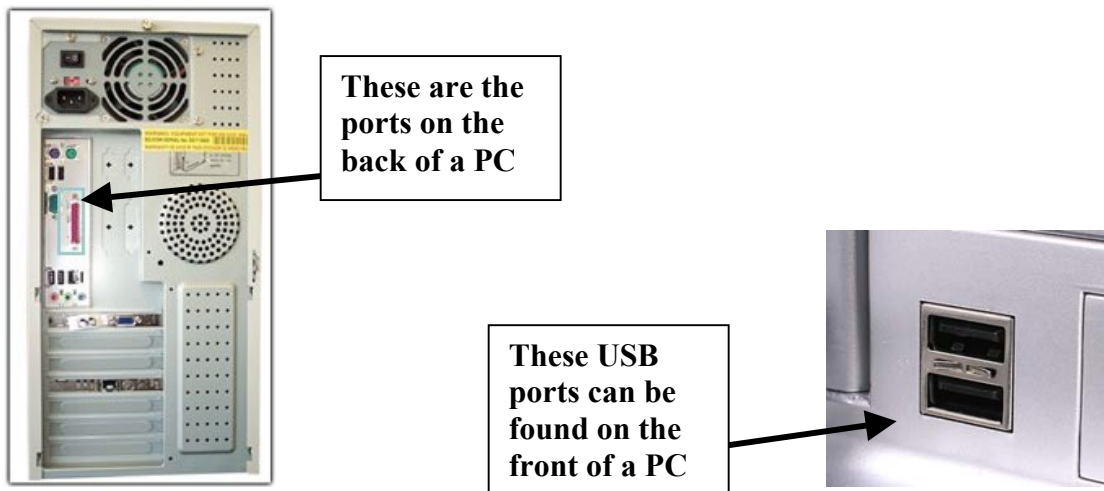
Objectives:

- o Learn the basic parts of the PC
  - o Monitor
  - o Keyboard
  - o Mouse
  - o Ports (on front and back of PC)
  - o Drives
  - o Take a look inside a computer

- o Learn about the Desktop
  - o Icons/Shortcuts
  - o Start Button
  - o System Tray/Taskbar
  - o Opening programs/applications from Shortcuts and Start Menu

- o Learn about disks, CDs, USB-drives
  - o Floppy disks
  - o CD-ROMS
  - o CD-R/CD-RW
  - o USB- Drives

- o Learn how to care for your PC
  - o Good practices
  - o Safety tips
  - o Anti-virus software
  - o Basic cleaning

Parts of The PC

- **CPU/Tower/Desktop** – These terms all describe the box where we find all the electronic components of a PC. Not all PCs look the same; some may be large towers, while others may be small machines that sit horizontally on a desk.
- **Monitor** – This is the TV-like screen that allows you to see what's going on. Monitors come in many different sizes and types, but all have the same basic function.
- **Keyboard** – The computer keyboard is designed like the keyboard on a typewriter. It allows the user to give the computer commands and to type documents. There are many different types of keyboards, but all allow the user to communicate with the PC.
- **Mouse** – The mouse is also used to communicate with the PC. The mouse controls the cursor/pointer on the screen so the user may open programs/applications, navigate a web site, and perform functions in word processing. Mice may be trac-ball, infrared, wireless, or any other type, but all help the user communicate with the PC.
- **Ports** – Port is just a fancy term for where you connect a device to the CPU. Ports are generally serial, parallel, PS2, or USB. Ports are usually found on the back of a PC, but some can be found on the front.

   Here is an example of what they might look like:

These are the ports on the back of a PC

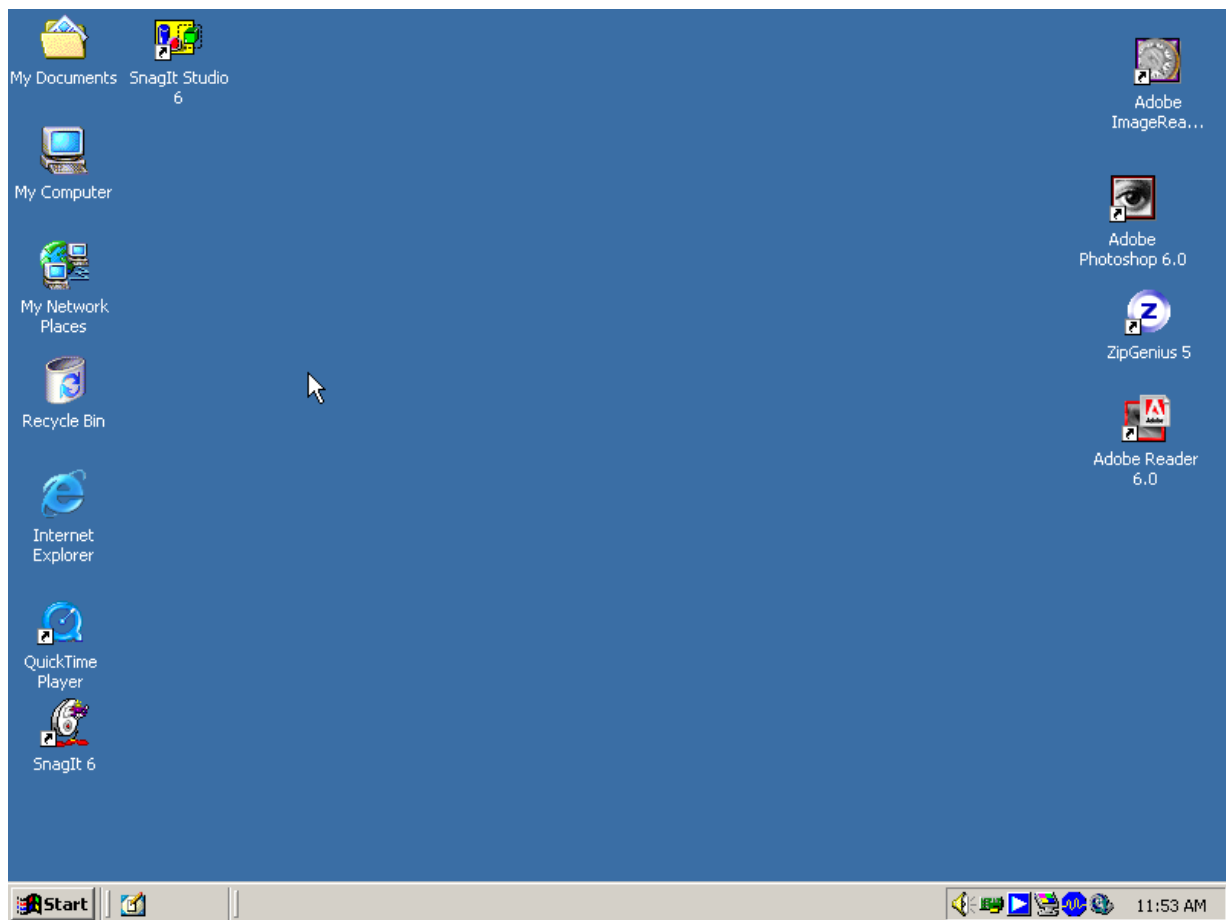**These USB ports can be found on the front of a PC**

- **Drives** – Drives are the parts of a computer that can store information. Each PC must have a hard drive where all software and system information is held. PCs may also have a floppy drive, CD-ROM, CD-RW, DVD, or any number of other types of drives for removable media. These types of drives allow a user to store information on a disk, CD, DVD, or USB-drive that can be taken out of the PC and used on another PC.
- **Inside the PC** – There are many other parts of a PC that make it work. These parts are inside the case and look like a bunch of chips and wires. All of these pieces play a role in each function of the computer. Unless you need to install memory or another internal device, you should have no reason to open up your computer. NEVER open your computer's case while it is plugged in!

Windows Desktop

- **Windows Desktop –** All Windows operating systems (95/98, ME, NT, 2000, XP) have a similar screen that appears when the computer is on and Windows has finished loading. This screen is called the desktop
- **About the Desktop –** The desktop is the screen where you will find:
    - The Start Menu/Button
    - The System Tray/Taskbar
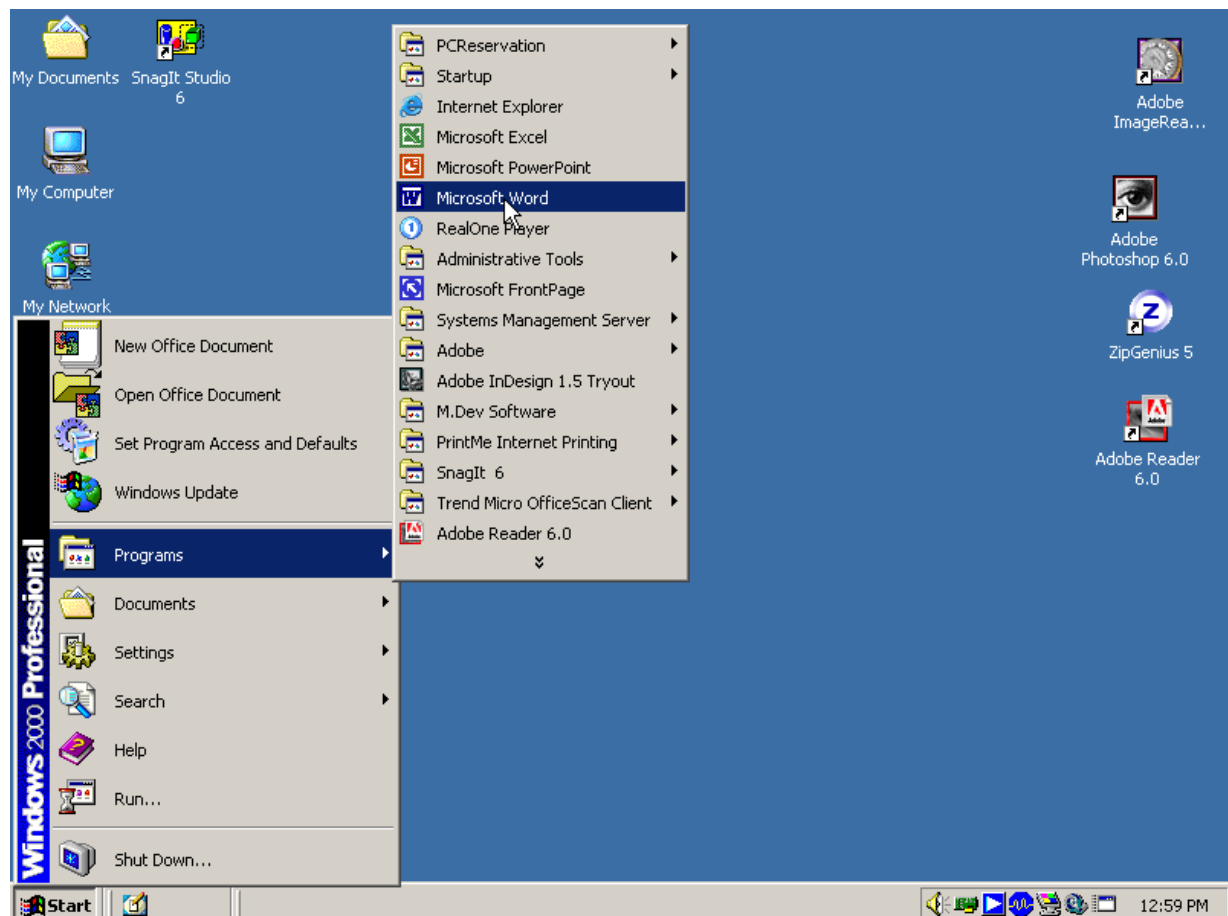   - Icons and Shortcuts
    - Cursor

Here is an example of what a desktop may look like:

Windows Desktop Exercises:

- **Opening an application or program using the Start Button/Start Menu**
  - Move your cursor to the Start Button and click once
  - When a popup menu appears, move your cursor up to Programs
  - When another popup menu appears, move your cursor the program you want to open and click once (if you see a small black arrow next to the program, that means there are more selections to choose from, keep going until you find the program you want)
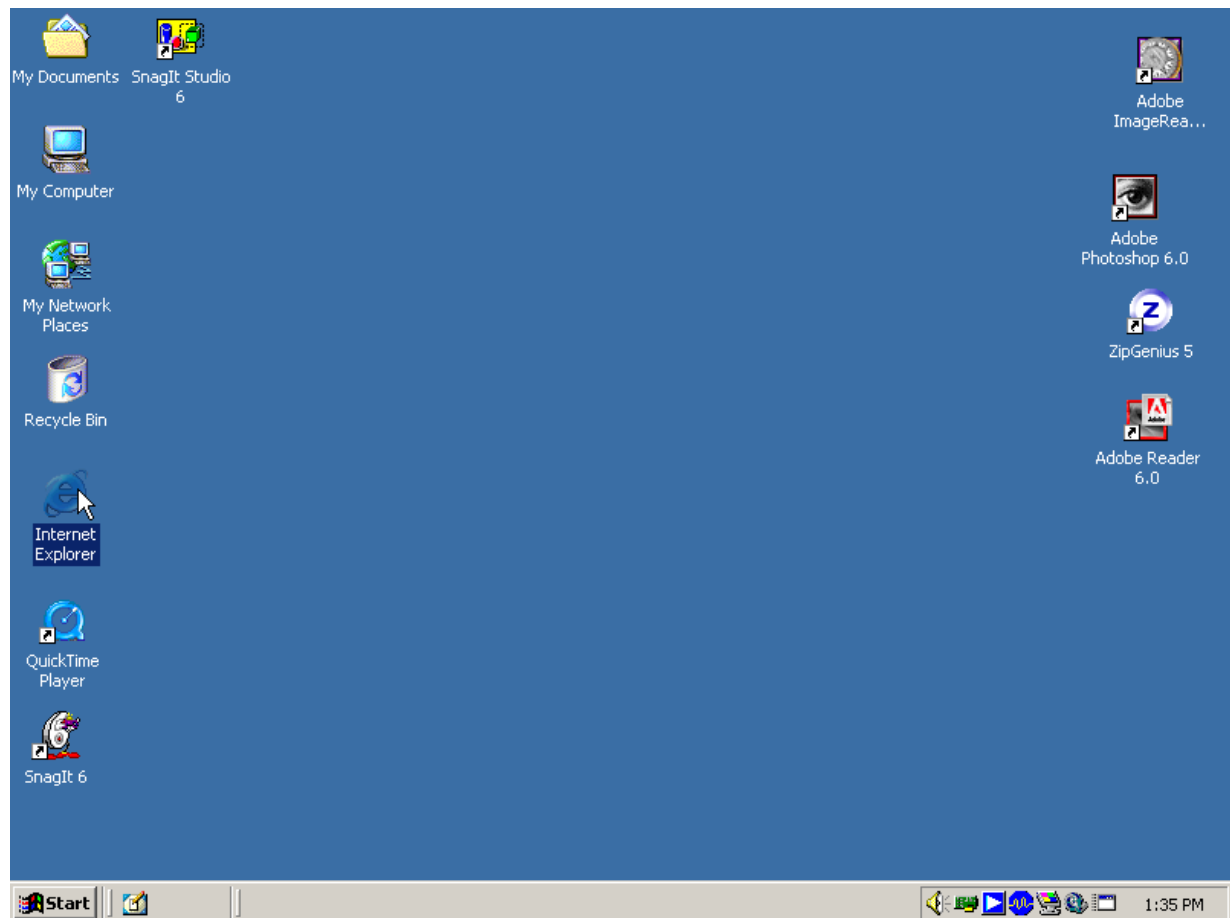
Example:

- The program you selected should open for you and over the desktop
- REMEMBER! Only click once, and wait for the program to open

- **Opening an application or program using an Icon/Shortcut**
    - Move your cursor to the Icon/Shortcut for the program you would like to open
    - Make sure the cursor is right on top of the Icon/Shortcut (not the words), and double-click (click twice quickly)
    - You can also click once on the Icon/Shortcut, then press the enter key on the keyboard

Example:

- The program you selected should open for you and over the desktop
- REMEMBER! Double-click and wait for the program to open, don't continue to click the mouse

Disk Drives and Removable Media

- **Floppy disk drive and floppy disks**
    - Floppy disks are 3 ½ inch square pieces of plastic with a metal piece on the end
    - Floppy disks can store up to 1.44 MB of data
    - Floppy disks only fit into a floppy disk drive on a PC
    - The floppy disk drive can be found in the front of most PCs and looks like a small slot with a button just below it
    - REMEMBER! A floppy disk must be inserted into the drive with the metal end first, label side up
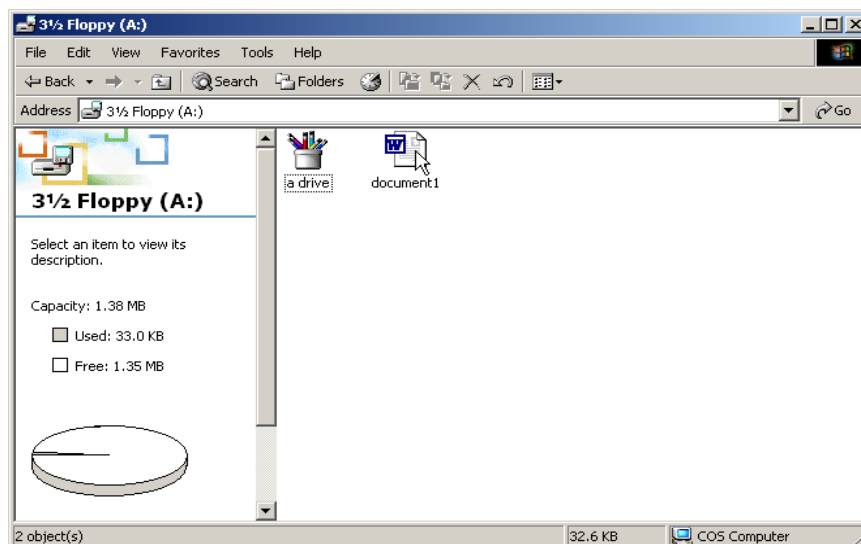
Example:

    - REMBMBER! If it doesn't go into the drive easily, <u>Do Not</u> force it, make sure you are inserting it properly or that there isn't something stuck in the drive

Floppy Disk Exercises:

- **Opening a file from a floppy disk**
    - Insert floppy disk into the floppy drive
    - Double-click on My Computer Icon
    - Double-click on 3 ½ Floppy (A:) Icon
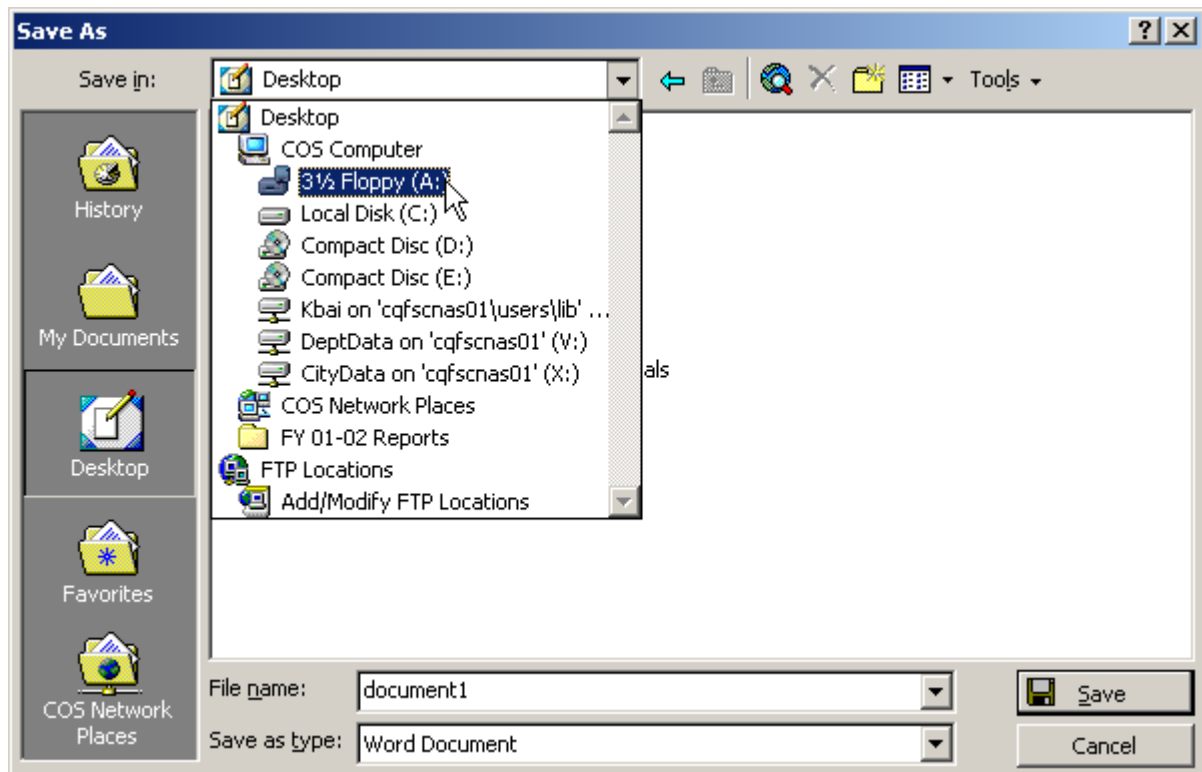   - Double-click on the File Icon for the file you want to open

Example:

- **Editing a document and saving it onto a floppy disk**
  - After you have finished editing a document, select File from the menu bar at the top of the screen
  - Move your cursor down to Save As, and click once
  - Click the drop-down menu and click once on 3 ½ Floppy (A:)
  - Type a name for your document in the Filename Box (if the filename you want is already in the Filename Box, you won't need to change it)

Example:

- After you have chosen the 3 ½ Floppy (A:) and named your document, click once on the save button
- The changes you made to your document will now be saved
- REMEMBER! Your changes will not be saved unless you tell the PC to save them
- SAVE EARLY, SAVE OFTEN!

- **Care and Handling of Floppy Disks**
  - Floppy disks are fragile and should be handled with care
  - Do not get them wet or store them near moisture
  - Do not expose them to extreme heat, especially in a hot car in Arizona!
  - Do not expose them to any type of magnetic field; your disk will be erased!
  - Protect them with a floppy disk case while not in use
  - If you have been using the same disk for a while, make a backup copy, disks do wear out with use

- **CD Drives and CDs**
  - Compact Discs or CDs are round, polycarbonate discs that can be used to store data, audio, and video
  - CDs can store up to 650 megabytes of data, the equivalent of about 700 floppy disks
  - There are several types of CDs:
    - CD-ROM – can only read the data on the CD, cannot save to it
    - CD-R – can read and save data to CD, cannot erase data once saved
    - CD-RW – can read, save, and erase data
  - Most PCs now come with a CD-RW drive included and the software to help you save data to a CD-R or CD-RW
  - The CD drive is usually located in the front of a PC and looks like either a slot or a drawer with a button just under it
  - CDs should be inserted label-side up

Example:

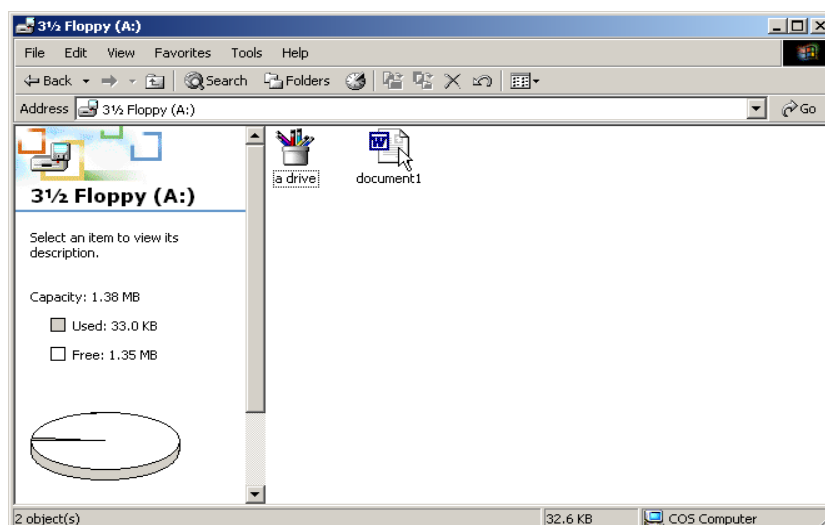CD Drawer   CD Slot

CD-ROM Exercises:

- **Opening a file from a CD**
  - Insert CD into CD drive
  - Double-click on My Computer Icon
  - Double-click on the Compact Disc Icon
  - Double-click on the File Icon for the file you want to open

Example:

- **Care and Handling of CDs**
  - Although CDs seem pretty sturdy and durable, they need to be treated with care
  - When handling a CD, hold it by the edges being careful not to touch the bottom of the CD (the side without writing on it)
  - Do not expose them to extreme heat, especially in a car in Arizona!
  - Store them in a protective CD case when not in use
  - Dust will scratch CDs and cause damage
  - If you need to clean a CD, clean it with a dry soft cloth wiping across the CD, <u>Do Not</u> wipe around the CD in circles, this will cause damage
  - If needed water or isoprophyl alcohol can be used to help remove grime

Care and Feeding of a PC

- **Good Practices**
  - Plug your PC, monitor, and peripherals (printer, scanner, etc.) into a surge protector
  - Keep your PC in a well-ventilated area
  - Keep your PC away from moisture, and moisture away from your PC
  - Properly turn off you PC and monitor when not in use

- **Safety Tips**
  - Sit in a comfortable chair when using a PC
  - Make sure your PC is on a stable surface
  - <u>NEVER</u> open the case on your PC while it is plugged in
  - Take breaks often to rest your eyes and increase circulation

- **Anti-Virus Software**
  - Purchase anti-virus software and keep it up-to-date
  - Scan your PC each time you turn on your PC
  - Anti-virus software will protect your computer from dangerous viruses

- **Basic Cleaning**
  - Clean your monitor with a clean soft cloth using water or isoprophyl alcohol if needed
  - Clean your keyboard with a clean soft cloth – if needed, use isoprophyl alcohol to remove grime – only use a small amount on a clean soft cloth, <u>Do Not</u> pour any liquid onto your keyboard
  - Canned air/compressed air can also be used to clean debris from keyboard
  - Clean your CPU with a clean soft cloth using water or isoprophyl alcohol if needed

- **Window Update**
  - If you use a Windows Operating system, visit the Windows Update website periodically to load "critical updates" and "patches" to correct any security loopholes that have been discovered since you acquired your operating system.
  - Connect to the Internet, then click Start, then Windows Update. You will be connected to Microsoft Windows Update web site, and your computer will be scanned to see what you need. Follow instructions for the critical updates.

Common Computer Terms

Byte - A unit of computer memory equal to that needed to store a single character.

CD-R - A write-once version of CD-ROM. CD-Rs can hold about 650 megabytes of data. They are very durable and can be read by normal CD-ROM drives, but once data has been written it cannot be altered.

CD-ROM - **An** optical data storage medium using the same physical format as audio compact discs, readable by a computer with a CD-ROM drive.

CD-RW - A rewritable version of CD-ROM. A CD-RW drive can write about 650 megabytes of data to CD-RW media an unlimited number of times.

CPU – Central Processing Unit. Also sometimes used to describe the "box" where all computer components are housed.

Driver - Software used to control a hardware component or peripheral device of a computer such as a mouse or printer.

Floppy Disk - A small, portable plastic disk used for storing computer data, readable by a computer with a floppy disk drive. A floppy disk can store up to 1.44 megabytes of data.

Gigabyte - A unit of computer data or storage space equivalent to 1,024 megabytes.

Hard Drive - A rigid disk inside a computer that is magnetized to hold a large quantity of computer data and programs. Current hard drives can typically hold from 20 to 120 gigabytes of data.

Icon/Shortcut - A small picture on a computer desktop intended to represent a file or an application. When an icon is clicked on, some action is performed such as opening an application or file.

Megabyte - A unit of computer memory or disk storage space equal to 1,048,576 bytes, or more generally, 1 million bytes.

Memory/RAM - The capacity of a computer to store information subject to recall or process tasks.

Operating System/OS - The essential program in a computer that maintains disk files, runs applications, and handles devices such as the keyboard, mouse, monitor, and printer.

Peripheral - A piece of equipment such as a printer or scanner that can be connected to a computer.

Port - An external socket on a computer's main unit (CPU) where a peripheral device such as a printer, keyboard, or mouse is plugged in.

Program/Application – Software on a PC used to perform a particular task. (Microsoft Word, Internet Explorer, etc.)

USB – Universal Serial Bus – A simple, fast connection for peripheral devices connected to a computer.